

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application. Please cancel claims 78, 88, and 89. Please amend claims 57-61, 66, 73, 76, 77, 80, and 81, as follows:

Listing of Claims:

1-56. (Cancelled)

57. (Currently amended) A method of generating a sequence of clock signals, comprising:

delay locking a reference clock signal to a master clock signal so that the reference clock signal has a predetermined phase relative to the phase of the master clock signal; and

delay locking a plurality of clock signals to the reference clock signal, ~~so that the~~ plurality of clock signals having different ~~have~~ respective phases relative to the phase of the reference clock signal.

58. (Currently amended) The method of claim 57 wherein delay locking the reference clock signal to the master clock signal comprises delay locking the reference clock signal to the master clock signal so that the reference clock signal is locked to the same phase as the master clock signal.

59. (Currently amended) The method of claim 57 ~~[[58]]~~ wherein delay locking the reference clock signal to the master clock signal comprises delay locking the reference clock signal to the master clock signal so that the reference clock signal ~~a first of the plurality of clock signals~~ has the same phase as the master clock signal and wherein delay locking a plurality of clock signals to the reference clock signal comprises delay locking ~~[[,]] one a second of the plurality of clock signals to have~~ ~~has~~ a phase opposite the phase of the reference clock signals, and the remainder of the plurality of clock signals have respective phases that are

spaced from each other between the phases of the reference clock signal ~~first and the one second~~ clock signals.

60. (Currently amended) The method of claim 59 wherein the remainder of the plurality of clock signals are spaced from each other between the phases of the reference clock signal ~~first and the one second~~ clock signals equally.

61. (Currently amended) A method of generating a sequence of clock signals from a master clock signal, comprising:

generating the sequence of clock signals, each clock signal of the sequence having a different ~~of which has a~~ respective phase that increases from a first clock signal to a last clock signal in the sequence;

delay locking the first clock signal and last clock signals to each other so that they have a predetermined phase with respect to each other;

delay locking one of the clock signals to the master clock signal so that each of the clock signals in the sequence have respective phases with respect to the master clock signal.

62. (Previously presented) The method of claim 61 wherein the step of delay locking the first clock signal and the last clock signal comprises delay locking the first clock signal and the last clock signal so that they have respective phases that are 180 degrees from each other.

63. (Previously presented) The method of claim 61 wherein the step of delay locking one of the clock signals to the master clock signal comprises delay locking the first clock signals to the master clock signal.

64. (Previously presented) The method of claim 63 wherein the step of delay locking the first clock signal to the master clock signal comprises delay locking the first clock signal to the master clock signal so that they have substantially the same phase.

65. (Previously presented) The method of claim 61 wherein the step of generating the sequence of clock signals comprises generating the sequence of clock signals so that they have respective phases relative to the phase of the master clock that increase uniformly from a first clock signal to a last clock signal in the sequence.

66. (Currently amended) A method of generating a sequence of clock signals, comprising:

generating the sequence of clock signals which are increasingly delayed from a first clock signal to a last clock signal, two of the clock signals in the sequence being delay locked to each other so that they have a predetermined phase with respect to each other; and

delay locking one of the clock signals to a master clock signal, ~~so that the clock signals in the sequence~~ having different ~~have~~ respective phases with respect to the master clock signal.

67. (Previously presented) The method of claim 66 wherein generating the sequence of clock signals comprises delay locking the first clock signal and the last clock signal to each other so that the first clock signal and the last clock signal have a predetermined phase with respect to each other.

68. (Previously presented) The method of claim 67 wherein the first clock signal and the last clock signal are delay locked to each other so that they are the inverse of each other.

69. (Previously presented) The method of claim 66 wherein generating the sequence of clock signals comprises increasingly delaying the clock signals in the sequence in equal increments from the first clock signal to the last clock signal so that adjacent clock signals in the sequence have respective phases that are equally spaced from each other.

70. (Previously presented) The method of claim 66 wherein generating the sequence of clock signals comprises delay locking the first clock signal and the last clock signal

so that they are the inverse of each other whereby the first and last clock signals have respective phases that are 180 degrees from each other.

71. (Previously presented) The method of claim 66 wherein delay locking one of the clock signals to a master clock signal comprises delay locking the first clock signals to the master clock signal so that they have substantially the same phase.

72. (Previously presented) The method of claim 66, further comprising selecting one of the clock signals to couple the selected clock signal to a clock output terminal.

73. (Currently amended) The method of claim 66 wherein the generating the sequence of clock signals comprises:

receiving a reference clock signal;

generating the sequence of clock signals from the reference clock signal by delaying the reference clock signal by respective delays that are a function of a control signal; and

comparing the phase of two of the clock signals in the sequence and generating the control signal as a function of the difference therebetween. [[:]]

74. (Previously presented) The method of claim 73 wherein generating the sequence of clock signals comprises:

generating a first signal during the period that the phase of the first clock signal lags the phase of the last clock signal;

generating a second signal during the period that the phase of the first clock signal leads the phase of the last clock signal; and

generating as the control signal a voltage that increases toward one polarity responsive to the first signal and toward the opposite polarity responsive to the second signal.

75. (Previously presented) The method of claim 66 wherein delay locking one of the clock signals to a master clock signal comprises:

receiving the master clock signal;

generating a reference clock signal having a delay relative to the master clock signal that is a function of a control signal; and

comparing the phase of the master clock signal to the phase of one of the clock signals in the sequence and generating the control signal as a function of the difference therebetween.

76. (Currently amended) The method of claim 66 wherein delay locking the one of the clock signals to the master ~~the generating the reference~~ clock signal comprises:

generating a first signal during the period that the phase of the master clock signal lags the phase of the one of the clock signals in the sequence;

generating a second signal during the period that the phase of the master clock signal leads the phase of the one of the clock signals in the sequence; and

generating as the control signal a voltage that increases toward one polarity responsive to the first signal and toward the opposite polarity responsive to the second signal.

77. (Currently amended) A method for providing a plurality of clock signals that have predetermined phases relative to a master clock signal, the method comprising:

producing a reference clock signal having a phase relative to the master clock signal that is a function of a first control signal;

generating the first control signal as a function of the difference in phase between the master clock signal and the reference clock signal;

producing the plurality of clock signals having different respective phases relative to the reference clock signal that are a function of a second control signal; and

generating the second control signal as a function of the difference in phase between the reference clock signal and one of the plurality of clock signals.

78. (Cancelled)

79. (Previously presented) The method of claim 77 wherein the reference clock signal having a phase relative to the master clock signal is one of the plurality of clock signals produced.

80. (Currently amended) The method of claim 77 wherein generating ~~producing~~ the first control signal comprises:

generating an enable signal during the period that the phase of the master clock signal lags the phase of the reference signal; and

generating as the first control signal a voltage that increases toward one polarity responsive to the enable signal and toward the opposite polarity responsive to the absence of the enable signal.

81. (Currently amended) The method of claim 77 wherein generating ~~producing~~ the second control signal comprises:

generating an enable signal during the period that the phase of the reference clock signal lags the phase of the one of the plurality of clock signals; and

generating as the second control signal a voltage that increases toward one polarity responsive to the enable signal and toward the opposite polarity responsive to the absence of the enable signal.

82. (Previously presented) The method of claim 77 wherein producing the plurality of clock signals comprises producing N clock signals, the phase of each of the clock signals relative to the phase of the master clock signal is $[M/N]*180$ degrees, where $M=0, 1, \dots N$.

83. (Previously presented) The method of claim 77, further comprising selecting one of the plurality of clock signals to couple the selected clock signal to a clock output terminal.

84. (Previously presented) A method for providing a sequence of clock signals that have predetermined phases relative to a master clock signal, the method comprising:

generating a reference clock signal having a delay relative to the master clock signal that is a function of a first control signal;

generating the sequence of clock signals each of which has a delay relative to an adjacent clock signal in the sequence that is a function of a second control signal;

comparing the phase of the master clock signal to the phase of a first one of the plurality of clock signals and generating the first control signal as a function of the difference therebetween;

delay locking the phase of the first clock signal to the phase of the master clock signal;

comparing the phase of two of the plurality of clock signals and generating the second control signal as a function of the difference therebetween; and

delay locking the phases of the two clock signals to each other.

85. (Previously presented) The method of claim 84 wherein comparing the phase of two of the plurality of clock signals comprises comparing the phase of the first clock signal to the phase of a last clock signal in the sequence of clock signals.

86. (Previously presented) The method of claim 85 wherein delay locking the phases of the two clock signals comprises delay locking the first clock signal to the inverse of the last clock signal.

87. (Previously presented) The method of claim 85 wherein the clock signals in the sequence between the first and last clock signal are equally phased apart from each other and the first and last clock signals.

88. (Cancelled)

89. (Cancelled)

90. (Previously presented) The method of claim 84, further comprising selecting one of the clock signals to couple the selected clock signal to a clock output terminal.